

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-13. Cancelled.

14. (New) Method for the production of a cast component, in particular a gas turbine component, with the following steps:

- a) Provision of a melting crucible and at least one semi-finished product made of an intermetallic titanium-aluminum material;
- b) Melting of the semi-finished product or each semi-finished product made of the intermetallic titanium-aluminum material in the melting crucible;
- c) Adding of a plurality of additional elements or additional compounds to the molten mass in successively in time depending on their melting temperature, wherein at least one element and/or one compound with a high melting point is added to the molten mass first, followed by at least one further element and/or one further compound with a lower melting point,
- d) Provision of a casting mold;
- e) Pouring the molten mass into the casting mold;
- f) Hardening of the molten mass in the casting mold; and
- g) Removal of the cast component from the casting mold.

15. (New) Method according to claim 14 characterized in that refractory additional elements or compounds are added first to the molten mass, followed by volatile additional elements or compounds and, and then, if necessary, fine materials.

16. (New) Method according to claim 15 characterized in that the elements tungsten, tantalum, niobium and, if necessary, titanium or alloys of these elements are added as refractory additional elements to the molten mass.

17. (New) Method according to claim 15 characterized in that manganese or an alloy of this element is added as volatile additional element to the molten mass.

18. (New) Method according to claim 15 characterized in that titanium boride is added as fine material to the molten mass.

19. (New) Method according to claim 14 characterized in that the element or each element and/or the compound or each component is added to the molten mass in defined doses and/or amounts, wherein the respective dose and/or amount is measured such that, assuming a molten mass temperature prior to the addition, the temperature is always greater than 1550° C after the addition, and the temperature before the addition will be reached again after a maximum of 15 minutes.

20. (New) Method according to claim 14 characterized in that the additional element or each additional element and/or the additional compound or each additional compound is added to the molten mass in defined doses and/or amounts, wherein the respective dose and/or amount has a maximum weight of 250 g at an element and/or compound density of greater than 6 g/cm³.

21. (New) Method according to claim 14 characterized in that the additional element or each additional element and/or the additional compound or each additional compound is added to the molten mass in defined doses and/or amounts, wherein the respective dose and/or amount has a maximum weight of 50 g at an element and/or compound density of less than 6 g/cm³.

22. (New) Method according to claim 14 characterized in that the additional element or each additional element and/or the additional compound or each additional compound is added to the molten mass in a defined, flow-optimized geometry.

23. (New) Method according to claim 22 characterized in that the flow-optimized geometry enables good transportation of the element or each element or the compound or each compound within the molten mass.

24. (New) Method according to claim 14 characterized in that, during the melting process, the melting crucible is inductively warmed up and/or heated and with this also the semi-finished product or each semi-finished product and the element or each element, as well as the compound or each compound to be melted in the melting crucible.